

Application No.: Not Yet Assigned

Docket No.: 12810-00008-US

AMENDMENTS TO THE CLAIMS

1. (Original) A process for the removal of water from a mixture comprising water and zinc chloride, which comprises
adding to said mixture comprising water and zinc chloride an aprotic, polar diluent
whose boiling point in the case where an azeotrope is not formed between said diluent and water
under the pressure conditions of the distillation mentioned below is higher than the boiling point
of water and which is in liquid form at this boiling point of water
or
which forms an azeotrope or heteroazeotrope with water under the pressure and temperature
conditions of the distillation mentioned below,
and
distilling the mixture comprising water, zinc chloride and the diluent with removal of water or
said azeotrope or said heteroazeotrope from this mixture, giving an anhydrous mixture
comprising zinc chloride and said diluent, wherein the aprotic, polar diluent employed is an
aliphatic, olefinically unsaturated nitrile selected from the group consisting of 2-cis-
pentenenitrile, 2-trans-pentenenitrile, 3-cis-pentenenitrile, 3-trans-pentenenitrile, 4-
pentenenitrile, E-2-methyl-2-butenitrile, Z-2-methyl-2-butenitrile, 2-methyl-3-butenitrile
or a mixture thereof.
2. (Original) A process as claimed in claim 1, wherein the diluent is able to form an
azeotrope or heteroazeotrope with water under the distillation conditions.
3. (Currently amended) A process as claimed in claim 1, ~~in either of claims 1 and 2~~,
wherein the mixture comprising water and zinc chloride has a pH of less than 7.

4. (Currently amended) A process as claimed in claim 1, ~~in any one of claims 1 to 3~~, wherein the mixture comprising water and zinc chloride has a pH in the range from 0 to less than 7.
5. (Currently amended) A process as claimed in claim 1, ~~in any one of claims 1 to 4~~, wherein an acid is added to the mixture comprising water and zinc chloride.
6. (Original) A process as claimed in claim 5, wherein the acid employed is HCl.
7. (New) A process as claimed in claim 2, wherein the mixture comprising water and zinc chloride has a pH of less than 7.
8. (New) A process as claimed in claim 7, wherein the mixture comprising water and zinc chloride has a pH in the range from 0 to less than 7.
9. (New) A process as claimed in claim 8, wherein an acid is added to the mixture comprising water and zinc chloride.
10. (New) A process as claimed in claim 9, wherein the acid employed is HCl.
11. (New) A process as claimed in claim 1, wherein a proportion of zinc chloride, based on the total weight of zinc chloride and water, in the region is at least 0.01% by weight.
12. (New) A process as claimed in claim 1, wherein a proportion of zinc chloride, based on the total weight of zinc chloride and water, in the region is at least 0.1% by weight up to 60% by weight.
13. (New) A process as claimed in claim 1, wherein a proportion of zinc chloride, based on the total weight of zinc chloride and water, in the region is at least 0.5% by weight up to 30% by weight.